


# Title: VIA Connected Clients

## Date: 2007/6/6

Ultra Mobility

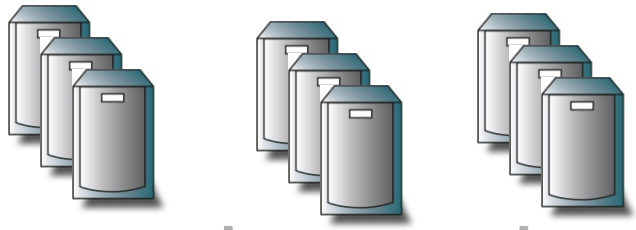
# Agenda

- Existing Connected Clients for Enterprise
- VIA Connect Client Solution
- The New Wave of Connected Clients
  - Green Computing
  - Mobile Thin clients
  - The Consumer Play
  - New Business Model
- Call to Action

# IT Infrastructure of Tomorrow

## Services Oriented Architecture

**Server Farm**



**Single or group of servers that host applications, data storage and deliver services to clients**

**Single access point**

**Delivery of information is controlled through a single interface managed by software such as Microsoft & CITRIX**

**Connected Clients**

**Clients are used as the interface to push and pull information and applications from the servers freeing end users to connect for different purpose**



**Mobile Client**



**Desktop Client**



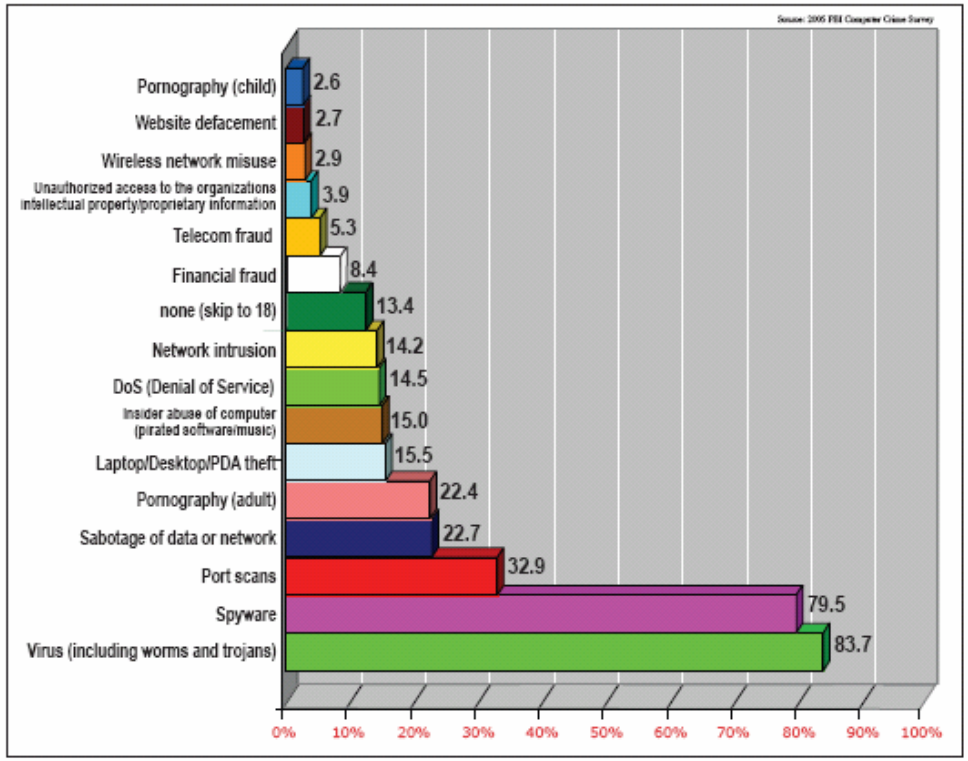

**Digital Out-Of-Home Media**



**Wireless Multimedia Presentation System**

# Factors Accelerating the Growth of Connected Clients

- **Security & Manageability**
  - Top 5 Security incidents listed on FBI Computer Crime Survey can be significantly reduced with use of Connected Clients
- **Total Cost of Ownership (TCO)**
- **The Prevailing Internet Connectivity in Enterprises**




Question: Which types of computer security incidents has your organization detected within the last 12 months? (select all that apply)

# VIA Desktop Client Platform Positioning

**Higher Reliability**

- Fanless and no hard disk system avoid damaging from hardware

**Market leading**

- Almost 50% of WW thin clients sold in 2006 were powered by VIA processors.
- Lots of reliable partner solution for customer to choose

**TCO minimization**

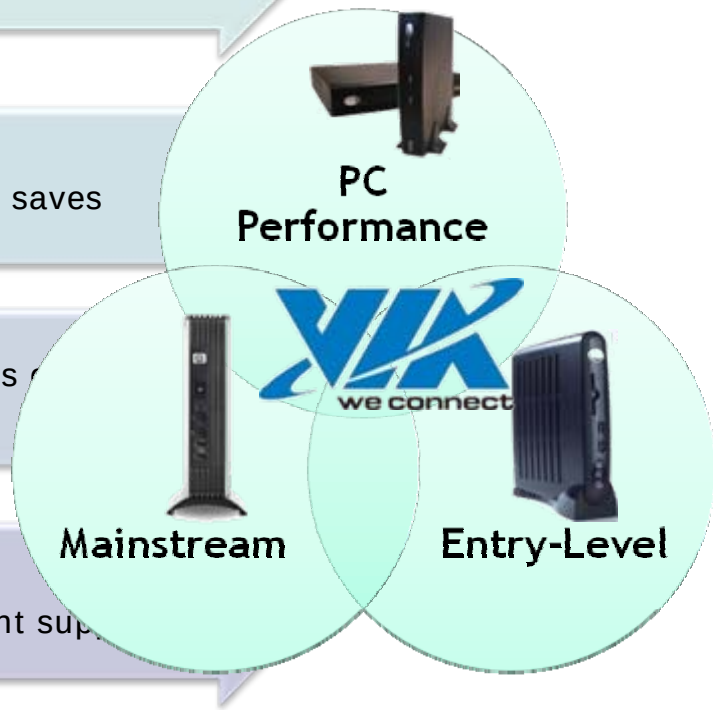
- Lower IT management cost
- Lower system power requirement saves electricity cost

**Robust security**

- Store critical data and applications
  secure, centralized server.
- Avoid

**Power efficiency**

- Lower power for fanless design
- PowerSaver ™ power management sup



# Connected Clients Nowadays…



Educational Sectors



Distribution Industries



Health Care Sectors



Government Information Centers



Insurance Industries



Telco Industries



Call Centers

Retail, Financial, Manufacturing, Transportation and more…

# VIA Connected Client Examples in Taiwan

Distribution- 奧黛莉Easy Shop

Manufacturer- 泰豐輪胎



政府機關醫療保險單位




馬達. 家電, 及半導體製程設備業




# Connected Clients to lower TCO
# -- The VIA Example

Ultra Mobility

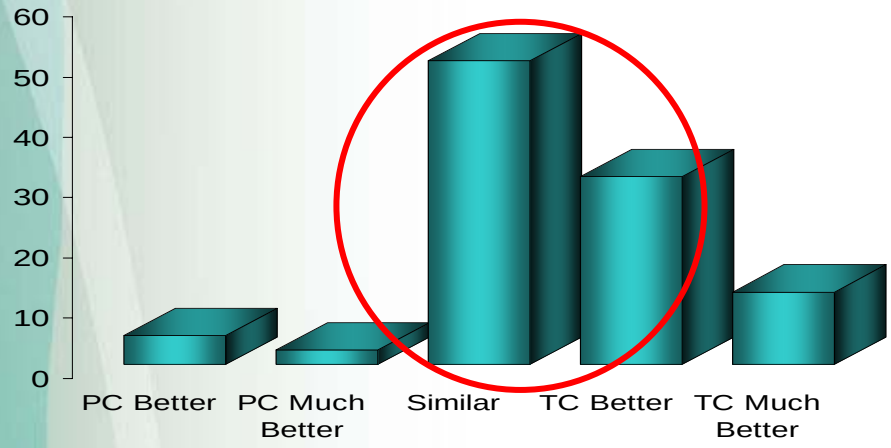
# Thin Client Deployment Experience Sharing

1. Significant reduced in IT helpdesk workload
2. Helps to avoid virus-infection
3. 1/5 of electricity expenses needed versus PC
4. One server can service 35 clients in average
5. Blade-server is much suitable & better than stand-alone server in performance, management & cost consideration.

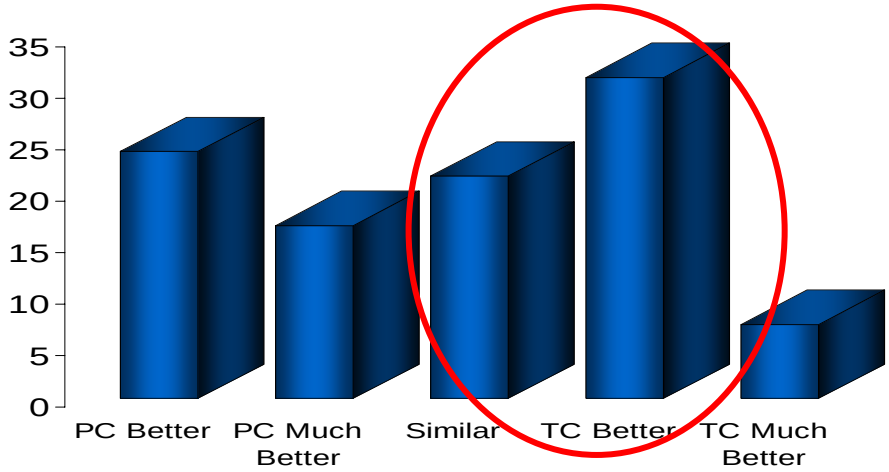
# Factors for Successful Deployment

1. Full authorization from top management
2. Education for end user : thin client workshop
3. Complete feasibility testing for different office applications
4. IT managers need to identify suitable user group base on the applications they use.

# User Feedback (1)




Restore Time

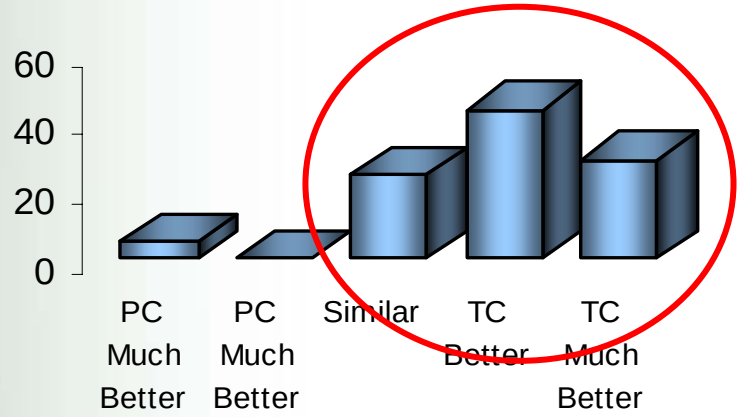



Software processing Response Time

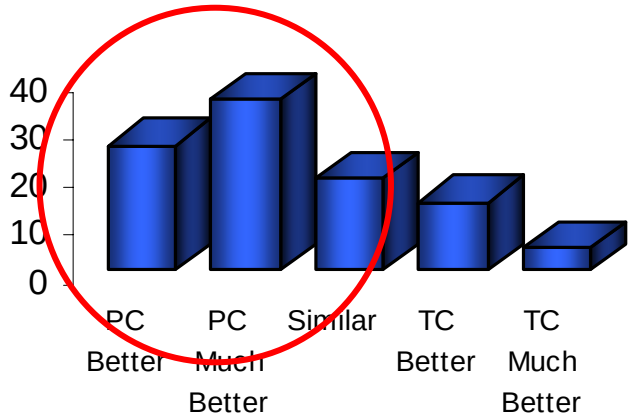
- Thin client has similar restore time as PC.
- In the Speed of software processing, most of the users reported TC is faster than PC.

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# User Feedback (2)




**Networking Security**

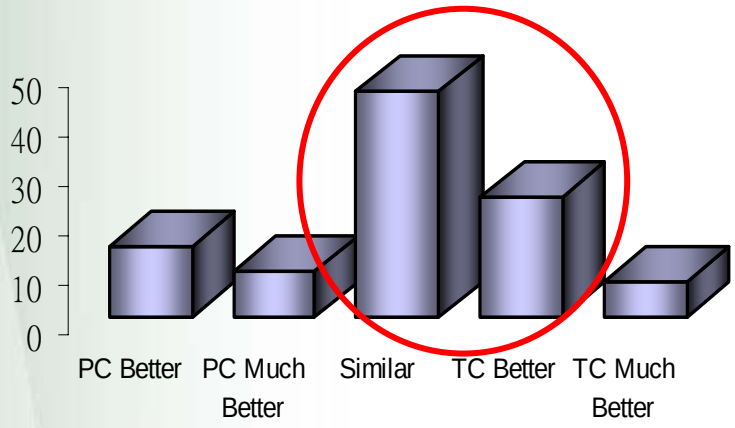



**Adding or upgrading Applications**

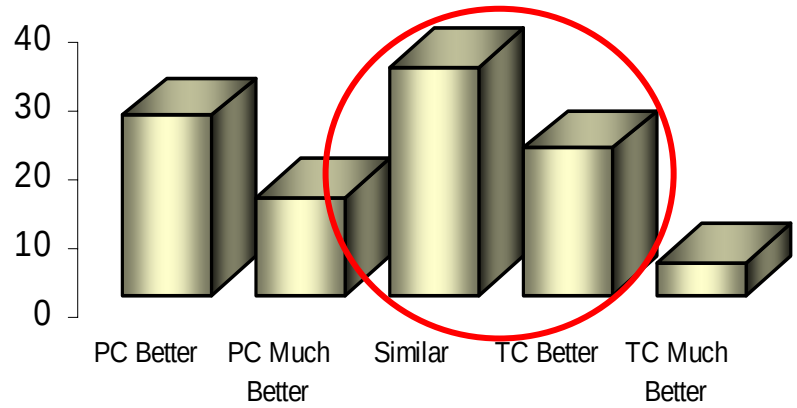
- **User experienced thin client device has better networking security than PC.**
- **Users prefer PC over TC when they would like to install new software application.**

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# User Feedback (3)




System Stability

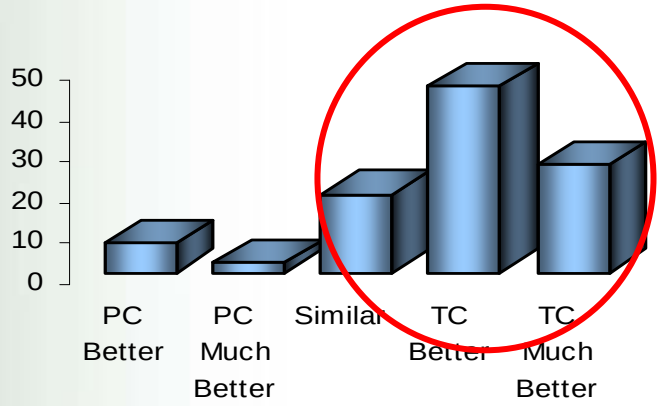



Web Browsing Experience

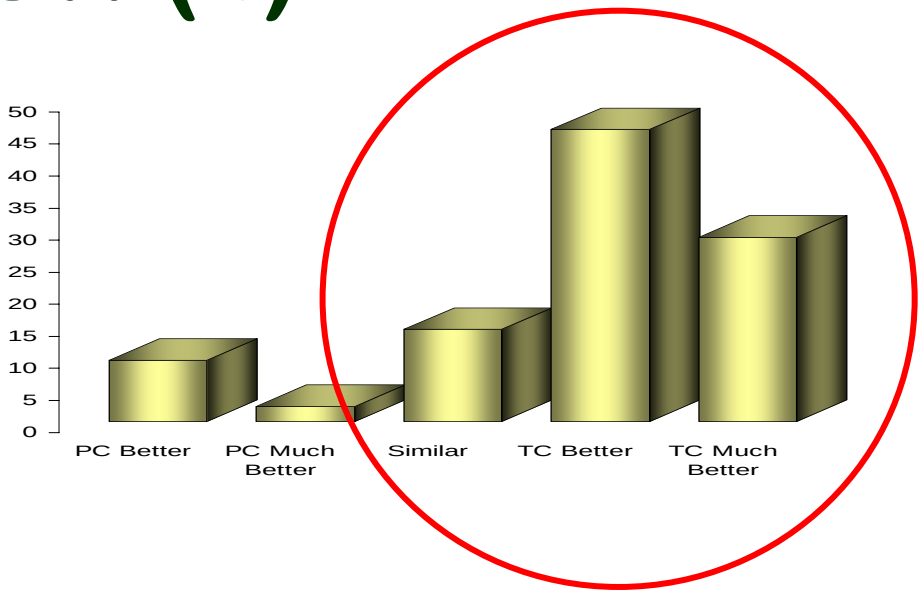
- User experienced system stability of thin client is similar or better than PC.
- Speed of internet web browsing with thin client is similar or better than using PC.

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# User Feedback (4)




Boot Up Speed

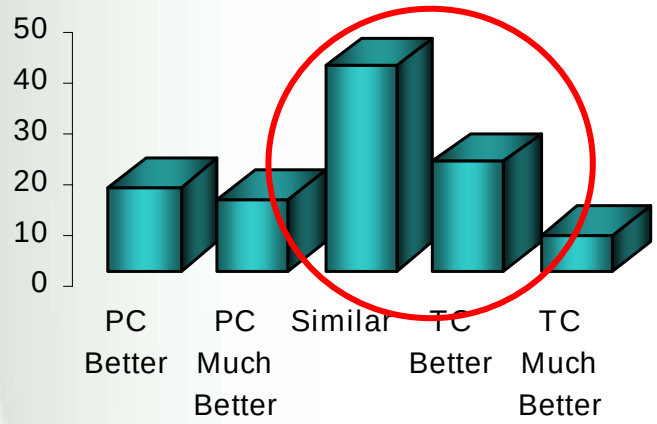



System Shut Down

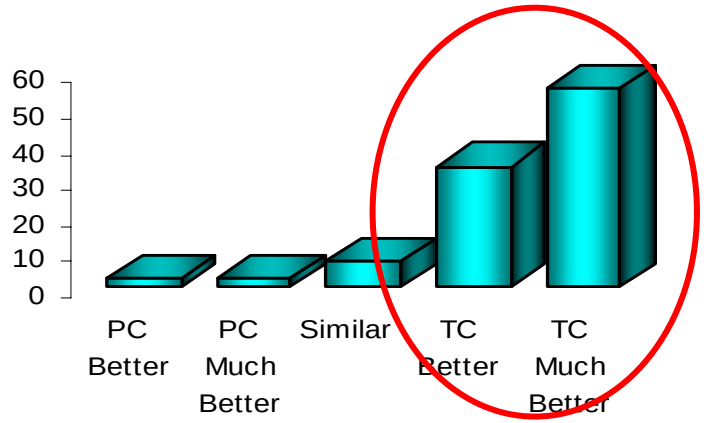
- Most of the users reported thin client with faster speed on rebooting O/S.
- Thin client is almost 4 times faster than PC at the speed of turning off system.

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# User Feedback (5)




**Access Time**

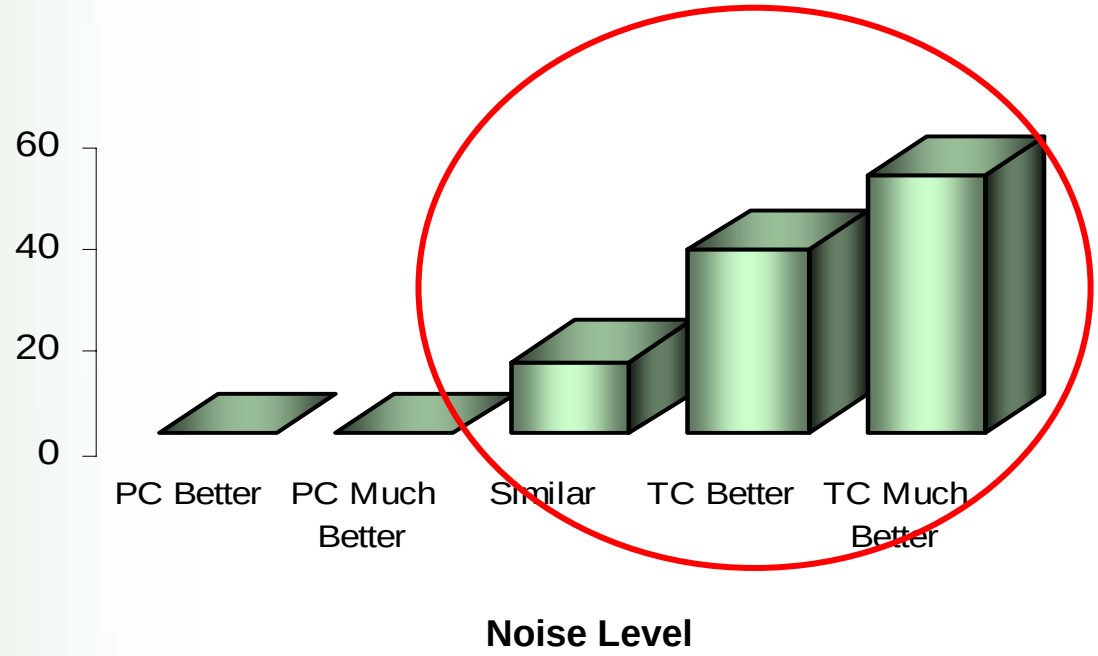



**IT Re-arrangement Flexibility**

- Most of the users experienced similar or even shorter access time with thin client.
- Significantly, it's much more convenient to rearrange IT resources with thin client architecture.

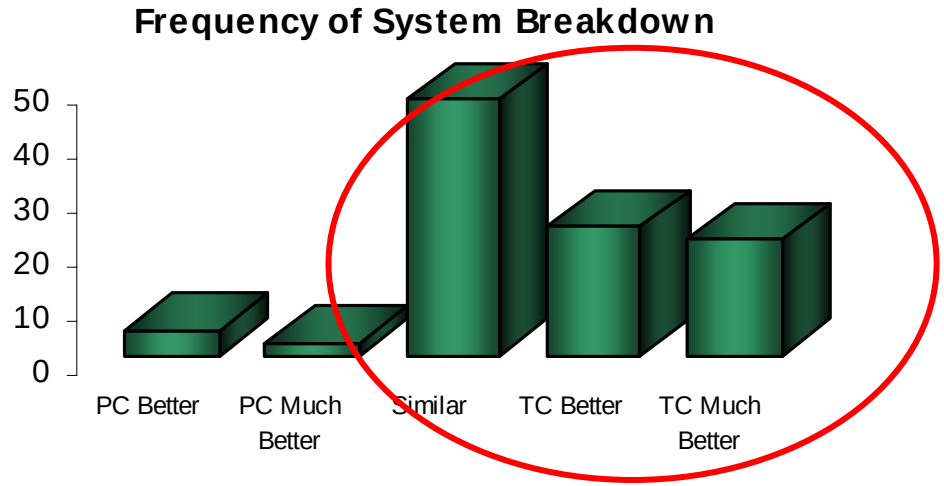
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# User Feedback (6)



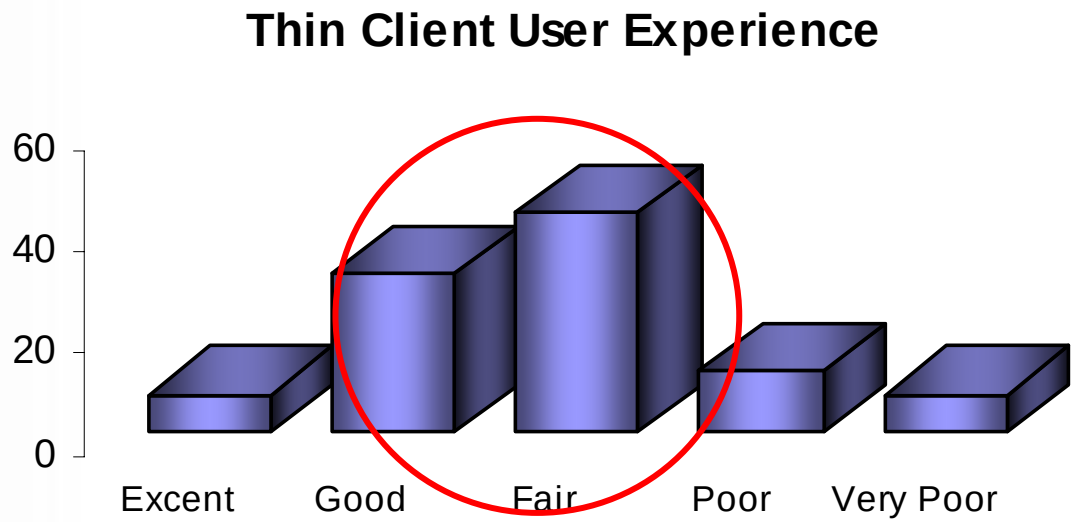

- Most users experienced noise reduction with thin client

# User Feedback (7)




- The frequency of system breakdown on thin client is similar or less than PC.
- Most of the reason of system breakdown were caused by server and network connection issue.

# General Feedback from User



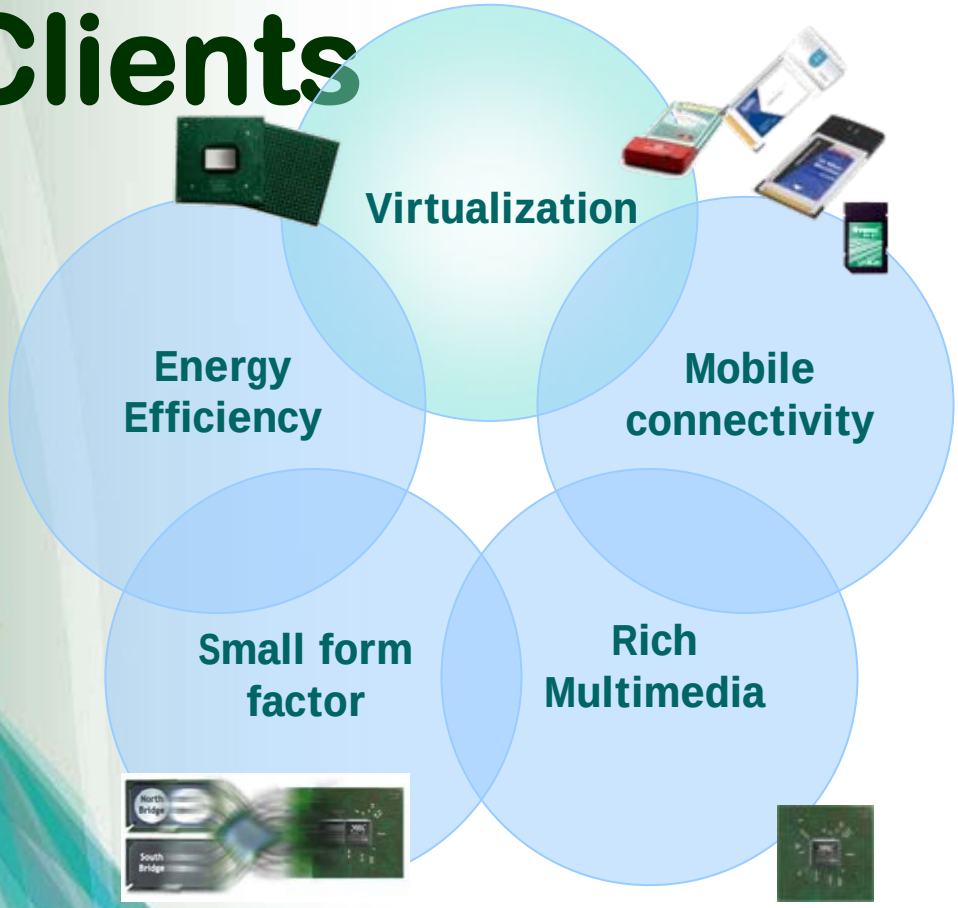

**To sum up, most of the users feel good and at least fair on the experience of using thin client.**

# What's Next ?

# New Trends for Connected Clients

- **Driving Factors**
  - Virtualization to further maximize use of IT resource
  - The Need for Green Computing
  - Rich Applications on Web
  - Broadcast of Content by Streaming Video Technology
- **New Forms**
  - Mobile Thin Clients
  - Digital Out-Of-Home Media
  - Wireless Presentation System
  - Hassel free and Green Client device
  - New Business Models

# VIA's Solution for Tomorrow's Connected Clients




- Low power processor with virtualization
- PCI / USB/ PCI-E /SDIO and SIP Support For 3G / WiFi/ WiMAX Mobile Connectivity
- Enhanced Video Decode Acceleration for Multimedia Support
- >35% Silicon Footprint Reduction with Highly Integrated Single Chip Solution
- Adaptive PowerSaver Technology for Maximum Energy Efficiency

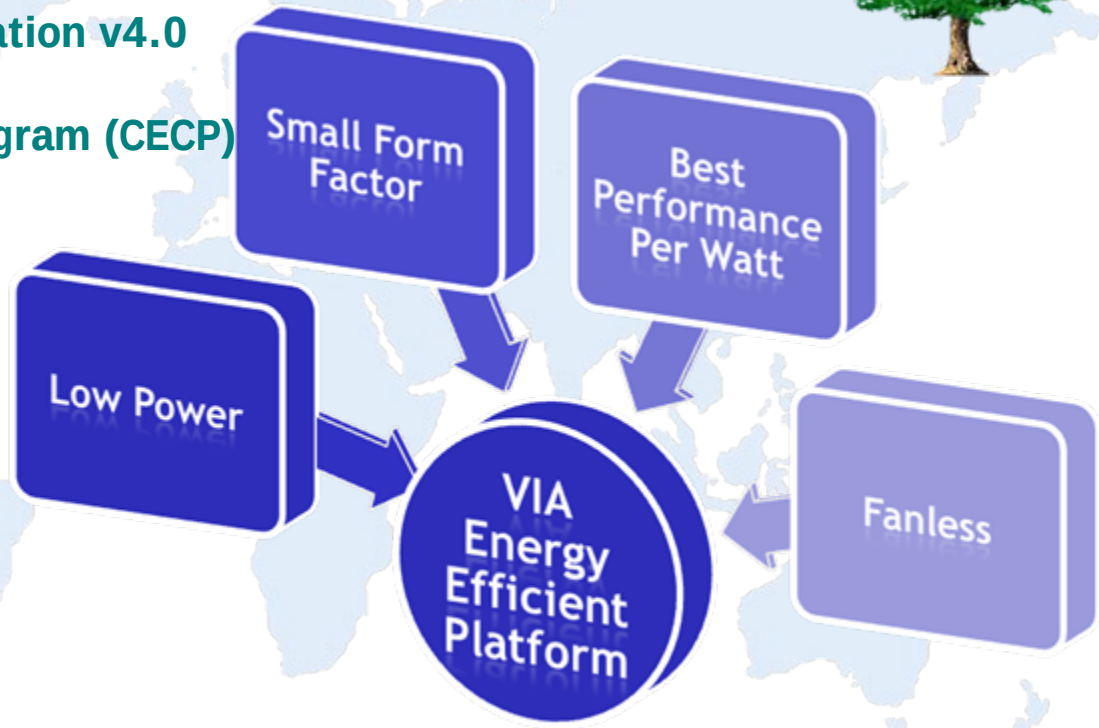
# Green Clients with VIA

**Best productivity with most energy efficient platform**

Target global energy efficiency standard

- **Energy Star Computer Specification v4.0**
- **China Energy Conservation Program (CECP)**






→ RoHS Compliant

→ Pure Lead Free

→ Halogen Free

# Green Computing with Connected Clients (1)

| Energy Requirement with Connected Client Architecture versus PC | | | |
|---|---|---|---|
| | **Thin Client** | **Thin Client with server pro rata + server cooling [3]** | **PC** |
| Power consumption [1] | 16 W | 41 W | 85 W |
| x 8 hours per day | 128 Wh | 328 Wh | 680 Wh |
| x 220 working days per year | 28 kWh | 72 kWh | 149 kWh |
| Costs for 1 working station per year [2] | $5.67 | $14.54 | $30.03 |
| - 10 working stations | $56.70 | $145.40 | $300.30 |
| - 100 working stations | $567.00 | $1,454.00 | $3,003.00 |
| - 1,000 working stations | $5,670.00 | $14,540.00 | $30,030.00 |
| **Savings or electricity cost compared to PC** | 81% | **51%** | |

Note 1 -- average active power
Note 2 -- electricity tariff = 0.15 kWh
Note 3 -- Worst case: 20 User / Server

**Source: Fraunhofer Institute 2007**

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# Green Computing with Connected Clients (2)

| CO2 Wastage of Connected Client Architecture versus PC | | | |
|---|---|---|---|
| | **Thin Client** | **Thin Client with server pro rata + server cooling [3]** | **PC** |
| Power consumption [1] | 16 W | 41 W | 85 W |
| x 8 hours per day | 128 Wh | 328 Wh | 680 Wh |
| x 220 working days per year | 28 kWh | 72 kWh | 149 kWh |
| CO2 resulting from 1 working station per year [2] | 38.89 lbs | 100.00 lbs | 206.95 lbs |
| - 10 working stations | 388.90 lbs | 1,000.00 lbs | 2,069.50 lbs |
| - 100 working stations | 3,889.00 lbs | 10,000.00 lbs | 20,695.00 lbs |
| - 1,000 working stations | 38,890.00 lbs | 100,000.00 lbs | 206,950.00 lbs |

**> 50 % less CO2 wastage**

Note 1 -- average active power
Note 2 -- The production of one kWh from the electricity network gives rise to 1.39 lbs CO2
Note 3 -- Worst case: 20 User / Server

**Source: Fraunhofer Institute 2007**

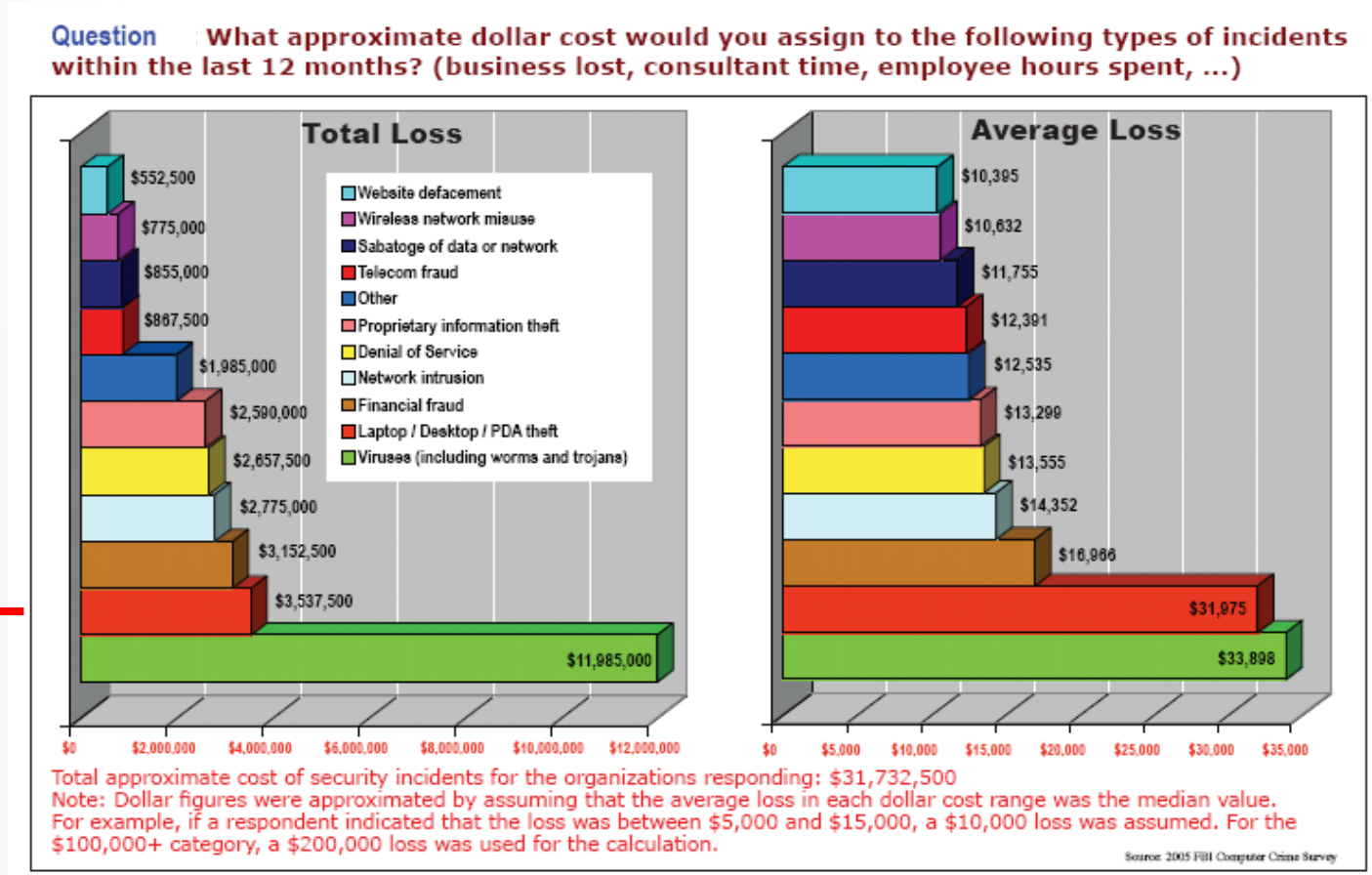
# The Web as Platform



# Clients Going Mobile



# FBI 2005 Computer Crime Survey




- **Laptop/PDA theft was the second highest category of financial loss with over $3,000,000.**
- While the vast majority of respondents were on the low end of each of the eleven categories as far as dollar loss, the financial impact is still very
- Significant. The virus, worm, and Trojan category was over three times larger than any other category with almost $12,000,000 in losses. Simple

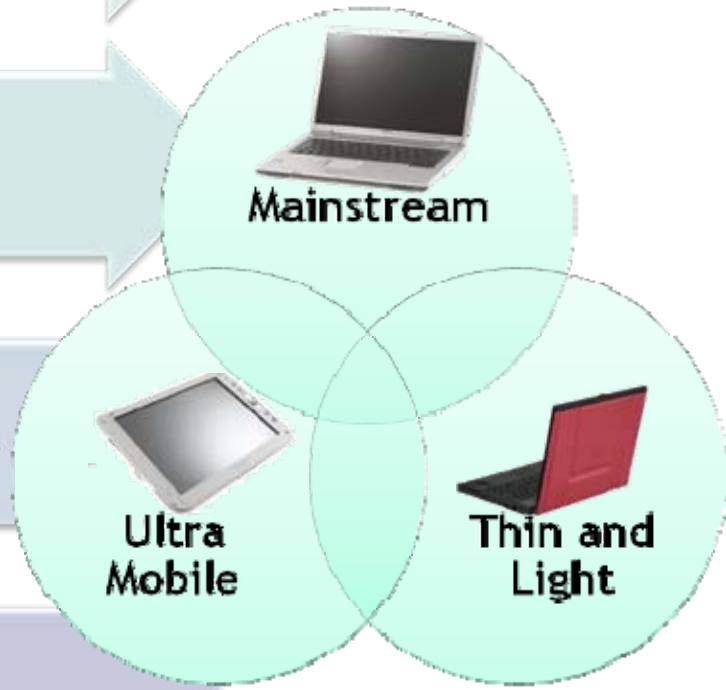
# VIA Mobile Thin Client Platform Positioning

**Long Battery Life**
- Fanless and lower power platform
- Power Management
- PowerSaver™ /TwinTurbo™

**Thin & Light**
- Small form factor
- Thin and light for easy carry to everywhere

**Rich Multimedia**
- MPEG2/MPEG4/WMV9 Decoder
- HDTV Encoder/LVDS Transmitter

**Ultra Security**
- All data are well managed at consolidated server end
- Discover the real costs of lost data



# Connected Clients Everywhere



Medical



Subway Video



Enterprise




Digital Signage



Flight Information



Distance Education



Focus Media Systems

# Call to Action

- **Industry CIO and IT Managers:**
  - To do small scale adoption of connected clients, To provide more case study in different verticals for reference
- **System Providers:**
  - Create more green clients
  - Explore different usage models
- **Software Partners**
  - Optimization with best performance
  - Enable stronger security solution for the current wireless infrastructure

# Thank You